

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter Of:

Allocation of Spectrum Below
5 GHz Transferred from
Federal Government Use

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ET Docket No. 94-32

**COMMENTS OF THE MOBILE AND PERSONAL COMMUNICATIONS
DIVISION AND FIXED POINT-TO-POINT MICROWAVE SECTION OF THE
TELECOMMUNICATIONS INDUSTRY ASSOCIATION**

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I. INTRODUCTION AND SUMMARY

This *Notice* concerns allocation and licensing rules for the use of the 2390-2400 MHz, 2402-2417 MHz, and 4660-4685 MHz bands. These bands, which allegedly comprise 50 MHz of spectrum, were reallocated from federal use to nongovernment use pursuant to the Omnibus Budget Reconciliation Act of 1993 and were the subject of a prior *Notice of Inquiry* proceeding earlier this year.¹ TIA believes, however, that neither the requirements or the intent of the *Budget Act* are being achieved by the actions taken by the NTIA or the FCC through the above-referenced *Notice*. The spectrum proposed identified for reallocation must be shared with other services and, clearly, some portion of that spectrum will be unusable by nongovernment users.² Fundamentally, TIA believes that the NTIA has not satisfied the provisions of the *Budget Act*. Nonetheless, TIA notes that any new infusion of spectrum holds promise for allowing the introduction of a variety of new land mobile and fixed radio services.

The *Notice* proposes to designate the new 50 MHz of nongovernment spectrum for general fixed and mobile services. Instead of specifying particular uses for the individual bands, however, the *Notice* proposes to divide the spectrum into channel blocks of one to two megahertz. Exclusive licenses for these blocks over specified geographic regions would then be auctioned, allowing licensees the greatest amount of technical flexibility feasible.

¹ Pub. L. No. 103-66, Title VI, § 6002(a)(3), 107 Stat. 379, 380, (1993) [*"Budget Act"*]; Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use, ET Docket No. 94-32, (May 4, 1994) [*"Notice of Inquiry"*].

² The specific limitations of each frequency band proposed for reallocation are difficult to quantify because non-Federal entities are denied access to the governments master frequency file. See, TIA Comments, NTIA Special Publication 94-27, May 11, 1994.

The *Notice* indicates that the policy goals to be served by this radical new approach are to ensure "that the spectrum is put to its best and most valued use and that the greatest benefit to the public is obtained."

TIA strongly supports the allocation of new radio spectrum for land mobile and fixed use. However, while TIA supports providing licensees with the flexibility to implement technically diverse systems, TIA believes that there are ways of fostering innovation without bypassing rulemaking proceedings to evaluate the competing needs of various radio services. By proposing to license allocations without holding service-specific rulemakings, for example, the *Notice* ignores the plight of private radio users, who cannot always satisfy their communications needs from commercialized spectrum offerings. Indeed, the proposal to auction radio allocations -- rather than radio licenses -- appears inconsistent with both the letter and spirit of the competitive bidding authority granted by Congress in the *Budget Act*. Moreover, the proposal to auction block allocations will also create dilemmas for manufacturers of radio equipment, which will directly affect service providers' ability to bring new radio capabilities to public and private users.

As for the specific frequency bands under consideration, the Commission should immediately allocate the 2390-2400 MHz paired with the 2300-2310 MHz band for land mobile use and initiate an additional rulemaking to propose service rules.³ Likewise, TIA is aware that numerous companies are involved in the manufacturing of Part 15 devices operating in the 2400-2483 MHz band. TIA urges the Commission to take no action with

³ TIA notes, in this regard, that the Commission has met its statutory obligation to "propose regulations to assign such [reallocated] frequencies" within 18 months of the enactment of the *Budget Act* with the issuance of the instant *Notice*. TIA nonetheless encourages the Commission to proceed expeditiously with the necessary service-specific proceedings required to reallocate this first 50 MHz for specific radio services.

respect to the 2402-2417 MHz band that reduces the utility of this spectrum for Part 15 operations.

II. THE PROPOSAL TO AUCTION SPECTRUM ALLOCATIONS IS INCONSISTENT WITH THE COMMISSION'S COMPETITIVE BIDDING AUTHORITY

Despite noting that "the Commission's authority under Section 309(j) to use competitive bidding . . . is *not* to be used for allocating spectrum,"⁴ the *Notice* proposes a plan that, in effect, allocates radio spectrum by auction. Although the *Notice* states that it is proposing a "broad and general" allocation, the only limitations proposed on the use of the spectrum are mean field strength limits at border areas between adjacent markets. To give any effect at all to Congress' prohibition on the auctioning of radio allocations, however, the Commission cannot proceed with such an ill-defined licensing scheme.⁵

The Commission has for good reason always drawn lines between competing uses when allocating spectrum. Land mobile spectrum, for example, was allocated either for private or common carrier use, with private spectrum further delineated into frequency pools (*e.g.*, Public Safety, Business Radio, Specialized Mobile Radio) and with common carrier spectrum further subdivided into use specific categories (*e.g.*, paging, IMTS, cellular telephony). Although some of these categories have blended with the reclassification of

⁴ *Notice* at ¶9 n.24.

⁵ Although the *Notice* states that "[t]his approach is similar to one taken in ET Docket No. 92-9," the proposed allocation scheme is *not* like the Commission's prior allocations for Emerging Technologies. ET Docket No. 92-9 did create a general purpose band, but the Commission stated that further rulemakings would occur as needed to allow use of Emerging Technologies spectrum for particular services. Extensive proceedings were held, for example, to reallocate spectrum from the Emerging Technologies bands for broadband Personal Communications Services.

services into private mobile radio services ("PMRS") and commercial mobile radio services ("CMRS"), all land mobile spectrum is subject to very specific requirements and the emissions characteristics on specific channels is uniform across the United States. To date, this service-specific block allocation framework has worked very well and has been replicated by countless other countries.

Congress did not intend to revise the frequency allocation framework in the United States when it granted the FCC competitive bidding authority. The rules of construction for Section 309(j) state quite plainly that "[n]othing in this subsection, or in the use of competitive bidding, shall . . . alter spectrum allocation criteria and procedures established by the other provisions of this Act." In this regard, Section 303(c) states that "the Commission . . . shall . . . [a]ssign bands of frequencies to the various classes of stations, and assign frequencies for each individual station and determine the power which each station shall use and the time during which it may operate." By allowing individual bidders, and therefore the auction process, to dictate the use of spectrum, the *Notice* proposal contravenes Congress' express prohibition.

Section 309(j) also states that expectation of federal revenue shall not be a valid criteria for allocation decisions. Specifically, Section 309(j)(7)(A) states:

In making a decision pursuant to section 303(c) to assign a band of frequencies to a use for which licenses or permits will be issued pursuant to this subsection, . . . the Commission may not base a finding of public interest, convenience, and necessity on the expectation of Federal revenues from the use of a system of competitive bidding

Although the *Notice* grounds the basis for the allocation plan on "ensur[ing] that the spectrum is put to its best and most valued use and that the greatest benefit to the public is attained," the unstated implicit assumption of the *Notice* is that the "best and most valued use" of spectrum and the "greatest benefit to the public" is determinable solely through the auction process. This amounts to determining that the highest bid -- or the greatest expectation of Federal revenue -- should decide spectrum usage.

Finally, the *Notice* ignores the rule of construction that states competitive bidding authority shall not be construed "to relieve the Commission of the obligation in the public interest to continue to use engineering solutions, negotiation, threshold qualifications, service regulations, and other means in order to avoid mutual exclusivity in application and licensing proceedings." In this regard, the Committee Report notes that the FCC uses "certain tools to avoid mutually exclusive licensing situations, such as spectrum sharing arrangements and the creation of specific threshold qualifications, including service criteria," and that these tools "should continue to be used." These tools, of course, are service-specific and cannot be implemented if the Commission's allocation decisions simply specify general blocks of land mobile and fixed spectrum with the service determined by the highest bidder.

The *Notice* proposal for competitive bidding of general land mobile and fixed allocations does not comply with Congress' express intent that "the FCC [continue] to make its [allocation] decisions based on sound communications policy pursuant to the Communications Act" and that "important communications policy objectives should not be

sacrificed in the interest of maximizing revenue."⁶ While the Commission's truism that "best and most valuable" use of spectrum equates with highest amount paid at auction is of dubious validity even in the purely commercial context,⁷ it is flatly wrong when applied to noncommercial uses, such as public safety. As Congress recognized, auction theory should not be applied to spectrum allocation.

III. THE NOTICE PROPOSAL MAKES UNWARRANTED ASSUMPTIONS REGARDING PRIVATE USERS ABILITY TO SERVE THEIR NEEDS BY USING COMMERCIAL COMMUNICATIONS NETWORKS

Despite significant and substantial evidence as to the need for additional private radio spectrum in the *Notice of Inquiry* phase of this proceeding, the *Notice* proposes no new spectrum allocations for private mobile radio service users.⁸ The *Notice* instead notes that "private users can receive service from commercial service providers and can compete in obtaining spectrum on the same basis as commercial providers." TIA believes that neither of these conclusions hold true in practice and that unless additional spectrum is specifically identified for private mobile radio use, critical needs will go unmet.

First, private users cannot satisfy their specialized communications needs from commercial service providers. Typically, private radio systems, both fixed and mobile, are

⁶ Committee Report at 258. Similarly, the Senate Report states "the FCC is not permitted to consider potential revenues from auctions in allocating spectrum for a general use." S.Rpt at 3.

⁷ For example, regional spectrum allocations may be more beneficial to the public if the allocations are used uniformly across the United States to provide the same, or similar, types of offerings and interoperability can be achieved. Indeed, in adopting competitive bidding procedures for PCS, the Commission noted that substantial interdependencies for regional licenses existed even in a service-specific context. Thus, without consistency of use, the value of the spectrum, both from a fiscal and public benefit perspective, will suffer.

⁸ See, e.g., Petition for Rulemaking of the Coalition of Private Users of Emerging Multimedia Technologies.

designed for specific applications at particular locations. Since most private radio users will not have any input into the types of services to be offered or into the coverage areas to be served by commercial radio service providers, there is no basis for assuming that their needs will be addressed by commercial offerings. Often, private users such as railroads and oil companies have important operations in remote locations. Such areas hold little promise for commercial opportunity for service providers and are typically left unserved. Also, the service reliability of commercial systems is often unacceptable to private users. This situation is especially true in the case of public safety systems, which have special priority communications and redundancy requirements developed to save lives and preserve property.

Second, private users are unlikely to be able to compete with commercial ventures for radio spectrum in an auction. As Congress recognized when it prohibited the Commission from auctioning non-profit private mobile radio spectrum,⁹ the value to the public in granting private radio licenses lies in saving lives, preserving property, increasing the productivity of industry and business, and general benefits to the economy. Because the "value" derived from these benefits is more diffuse than in the case of commercial radio ventures, private radio users cannot compete financially in the same arena as wireless carriers. Furthermore, larger service areas are a benefit to commercial providers, since larger service areas reduce incremental costs of extending geographic coverage, increase economies of scope and scale, and result in greater subscriber revenues. Service areas that are reasonable for commercial purposes, however, may be inappropriate for most private mobile radio users whose

⁹ Private users are exempt from competitive bidding. Also note "The Committee remains committed to protect public safety users from adverse effects of competitive bidding, and encourages the Commission to take into account the needs of public safety users in making allocation decisions." Committee Report at 254.

coverage needs vary considerably depending on the task at hand. Even if bidding for their desired service area was possible, private users generally could not compete for areas defined on the basis of commercial carrier-provided needs.

Under the circumstances, if the *Notice* proposal were adopted, commercialization of the radio spectrum will become a self-fulfilling prophecy. Private users will not be able to afford to purchase needed spectrum and consequently all of the new allocations are likely to be devoted to commercial applications. Because it is unlikely that commercial providers will tailor the types of radio services and coverage required by the vast variety of private users, the infusion of new land mobile spectrum will do little to alleviate the extreme spectrum scarcity problems for private radio users and will not allow the industry to deploy needed advanced technology private systems.

IV. THE PROPOSAL TO CREATE NON-SERVICE-SPECIFIC ALLOCATIONS POSES DILEMMAS FOR MANUFACTURERS THAT MAY LIMIT THE UTILITY OF THE ALLOCATIONS

The *Notice*'s proposed non-service-specific allocation scheme will have severe consequences on the development of radio products that may jeopardize any expected public benefit of "flexible" allocations. United States manufacturers have led the world in developing and exporting radio technologies, in part, because other countries have traditionally followed the FCC's lead in spectrum allocation matters. Manufacturers have been able to rely on an expanded market when developing radio devices for domestic allocations, since manufacturers are virtually assured that a number of other nations will make similar spectrum available for similar services. Even within the domestic market, the

proposed "allocation by auction" would significantly alter manufacturers' ability to develop equipment at reasonable cost -- or even to define a U.S. wide market. The *Notice's* proposal would remove all consistency in radio allocations, threatening the availability of new services, raising the price of radio equipment, and restricting the development of technology for domestic purchasers.

As an initial matter, under the *Notice* block allocation proposal, the same frequency band could be used for differing radio applications in every market in the country. Under the circumstances, it is highly unlikely that interoperability desired by the public will exist even in adjacent markets, much less across the United States. For example, when satellite operation was introduced into the fixed 4 GHz band, further use of the band by fixed users was severely limited. Even if interoperability is possible, it will undoubtedly drive up the cost of receivers that must operate in a more uncontrolled interference environment. The *Notice* proposal is thus likely to result in incompatible islands of service with little prospects for commercial success.

Moreover, the projected sales of a radio device is the most critical element in a manufacturer's decision to develop the product. With a sufficient market, it is elementary that product research and development costs can be recovered from a higher volume of sales. This, in turn, translates into greater availability of capital for research and development, better quality products, a greater variety of features and models, and faster development cycles. Lower product costs also synergistically broaden the market for a device, as shifting price points create greater buyer acceptance. Thus, the larger a projected market for a product, the greater the benefits that accrue to the public.

Unfortunately, the *Notice* proposal for non-service-specific allocation threatens to jeopardize the potential markets manufacturers have traditionally relied upon when making development decisions. Indeed, instead of being able to rely on global product market, manufacturers will not even be able to rely on a uniform domestic market, since there will be no consistency to licensees' use of spectrum blocks across the country. Ultimately, inconsistent use of spectrum will impact the consumer by limiting the availability of new services, discouraging manufacturer research and development, raising the price of radio equipment, impeding interoperability, and restricting the potential for the deployment of innovative new technologies.


V. CONCLUSION

TIA urges the Commission to reconsider the *Notice* proposal and instead use a more traditional allocation approach to developing service rules for the 50 MHz of government spectrum to be reallocated for private use. Many worthwhile services have identifiable spectrum deficiencies and the Commission should not abdicate its responsibilities for determining the highest priorities of public use. To this end, TIA encourages the FCC to proceed with allocating the 2390-2400 MHz band for land mobile service by pairing the band with the 2300-2310 MHz also to be made available from the government spectrum transfer. The Commission should not, however, begin licensing this spectrum without further service-specific rulemakings. A non-uniform auction block licensing scheme is inconsistent with Congress' expressed intent in granting the FCC competitive bidding authority, does not accommodate the critical needs of private radio users, and will have severe consequences on

the development of new radio products. Likewise, the Commission should not authorize licensed services within the 2402-2417 MHz band in any manner that threatens the continued viability of that band for consumer Part 15 devices. In TIA's view, utilizing this band for Part 15 operations is the most efficient and logical application of that spectrum.

Respectfully submitted,

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